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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/932,867	08/17/2001	George H. BuAbbud	069116.0259	6937

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EXAMINER

TRAN, HAI V

ART UNIT PAPER NUMBER

2611

DATE MAILED: 12/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/932,867

Applicant(s)

BUABBUD, GEORGE H.

Examiner

Hai Tran

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date ML
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed 10/03/2005 with respect to claims 1-5, and 7 have been considered but are moot in view of the new ground(s) of rejection.

In response to Applicant's request of prior art reference to support the Official Notice, the Examiner cites US 5018141 (Col. 1, lines 12-40 and Col. 5, lines 28-50) and US 4839923 (Col. 1, lines 25-60) to support.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beveridge (US 5615246) in view of Feldman et al. (US 6577414).

Claim 1, Beveridge discloses a method of providing TV signals or multiple of subscribers and bidirectional telephonic communications to a multiplicity of subscribers through a single optical fiber (Fig. 5, 6) comprising the steps of transmitting light of wavelength carrying plain old telephone service (POTS) telephonic signals from a plurality of telephone related services and TV signals from

a TV signal source through an optical fiber from a 1<sup>st</sup> end to a 2<sup>nd</sup> end and transmitting the **POTS** telephonic electrical signals to a plurality of telephone related devices and the second electrical signals to a plurality of TV signal receiving devices (Col. 8, lines 19-Col. 9, lines 23);

Beveridge does not clearly disclose “transmitting light at a first wavelength carrying plain old telephone service (POTS) telephonic signals from a first plurality of telephone related devices and at a second wavelength carrying TV signals from a TV signal source through an optical fiber from a first end to a second end; receiving said first wavelength of light and generating first electrical signals within a first frequency band and representative of said plurality of POTS telephonic signals; receiving said second wavelength of light and generating second electrical signals within a second frequency band and representative of said TV signals.”

Feldman discloses a method of providing TV signals or multiple of subscribers and bidirectional telephonic communications to a multiplicity of subscribers through a single optical fiber (Fig. 1) comprising the steps of transmitting light at a first wavelength carrying telephonic signals from a first plurality of telephone related devices and at a second wavelength carrying TV signals from a TV signal source through an optical fiber from a first end to a second end (Col. 5, lines 25-45); receiving said first wavelength of light and generating first electrical signals within a first frequency band and representative of said plurality of telephonic signals (Fig. 4; Col. 6, lines 45-65+); receiving said second wavelength of light and generating second electrical signals within a second frequency band and

representative of said TV signals (Fig. 4; Col. 4, lines 49-56; 66-Col. 5, lines 25); transmitting said telephonic electrical signals to a plurality of telephone related devices and said second electrical signals to a plurality of TV signal receiving devices (Fig. 4; Col. 4, lines 66-Col. 5, lines 25); generating a plurality of return electrical telephonic signals at said first frequency band representative of return telephonic information and a plurality of TV related electrical signals at a third frequency band representative of TV related information from said plurality of subscribers (Col. 6, lines 22-46); multiplexing said electrical signals carrying said return telephonic signals at said first frequency band and said TV related electrical signals carrying said TV related information at said third frequency band (Col. 7, lines 35-43); receiving said multiplexed electrical signals and generating light at said first wavelength representative of said return telephonic signals and said TV related information (Fig. 4, Col. 6, lines 63-Col. 7, lines 25); transmitting light at said first wavelength and carrying said return telephonic signals and said TV related information through said optical fiber from said second end to said first end (see Fig. 1); receiving said light carrying said return telephonic signals and said TV related information and generating a plurality of third electrical signals representative of said return telephonic signals and a plurality of fourth electrical signals representative of said TV related information (Fig.5); and transmitting said third electrical signals to said first plurality of telephone related devices and said fourth electrical signals to said TV signal source (Col. 4, lines 38-65+). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify

Beveridge with Feldman in order to improve the CATV Hybrid fiber-coax (HFC) network by combining multiple services, i.e., analog video, audio, telephony, Internet access, into a two-way composite optical signal using separate RF sub-carriers (see Summary of the invention).

Claim 2, Beveridge in view of Feldman (see Fig. 1, el. 150) further discloses wherein said first wavelength of light is 1310 nanometers and said second wavelength of light is 1550 nanometers.

Claim 3, Beveridge in view of Feldman further meets "wherein the highest frequency of the 1<sup>st</sup> frequency band is less than about 60Khz" because Beveridge's combined signal over the HFC network carries upstream/downstream POTS telephony signals to standard telephone wiring in the CPE (Beveridge, see Fig. 5; Col. 8, lines 44-52), wherein the frequency band that carries POTS telephonic signal is known to be less than 60Khz .

Claim 4, Beveridge in view of Feldman (upstream; Fig. 3) further discloses wherein said third frequency band is between about 5 and about 50 MHZ.

Claim 5, Beveridge in view of Feldman (downstream; Fig. 3) further discloses wherein said second frequency band is between about 50 MHZ and about 800 MHZ.

2. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beveridge (US 5615246) in view of Feldman et al. (US 6577414), and further in view of Fiber-

Optic Subscriber System based on passive Optical Network Architecture (Hitachi Review Vol. 43, 1994 by Masakazu Kitazawa et al.).

Claim 7, Beveridge in view of Feldman teaches all limitations of claim 7, as discussed in method claim 1. Since, Beveridge in view of Feldman (Fig. 1, el. 152 and 158) discloses bi-directional transmission through a HFC network; therefore, Beveridge in view of Feldman meets "communication signal for carrying bidirectional POTS telephonic signal between the 1<sup>st</sup> user and the 2<sup>nd</sup> user".

As to TCM bi-directional telephonic signals transmission through a HFC network, Beveridge in view of Feldman does not clearly disclose it.

Masakazu discloses the use of TCM bi-directional telephonic signals transmission through a fiber network (see Fig. 1 and introduction page 53-54) for economical reasons, as suggested by Masakazu. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Beveridge in view of Feldman using TCM technique to implement bi-directional transmission through a fiber network, as taught by Masakazu, so to provide an economical optical subscriber network that could carry analog telephone, narrowband ISDN and broadband service including video (see Introduction).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Tran whose telephone number is (571) 272-7305. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher C. Grant can be reached on (571) 272-7294. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HT:ht  
12/19/2005



**HAITRAN  
PRIMARY EXAMINER**